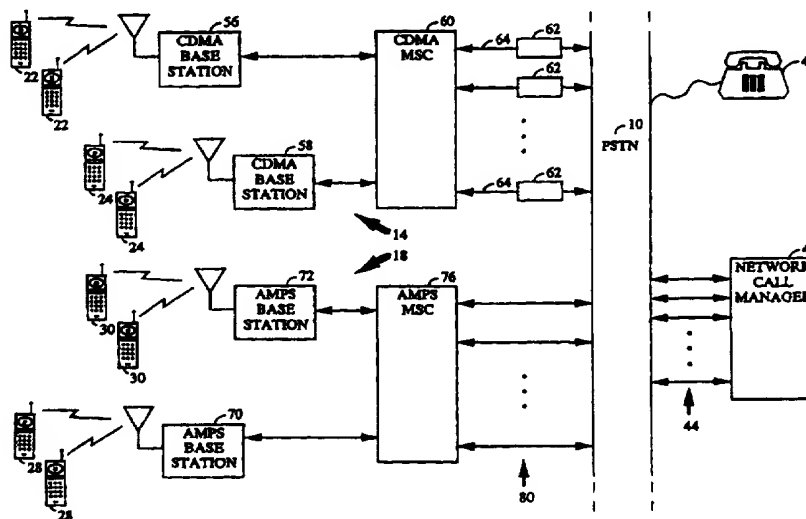




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>H04Q 7/20</b>		<b>A3</b>	(11) International Publication Number: <b>WO 97/28658</b>
			(43) International Publication Date: 7 August 1997 (07.08.97)
(21) International Application Number: PCT/US97/01521		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 29 January 1997 (29.01.97)			
(30) Priority Data: 595,566 1 February 1996 (01.02.96) US			
(71) Applicant: QUALCOMM INCORPORATED [US/US]; 6455 Lusk Boulevard, San Diego, CA 92121 (US).			
(72) Inventors: LEKVEN, Eric, J.; 3034 Levante Street, Carlsbad, CA 92009 (US). GROB, Matthew, S.; 2757 Bordeaux Avenue, La Jolla, CA 92037 (US). YAFUSO, Byron, Y.; 10093 Branford Road, San Diego, CA 92129 (US). ROGERS, Steven, L.; 13451 Sparren Court, San Diego, CA 91929 (US).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	
(74) Agents: MILLER, Russell, B. et al.; Qualcomm Incorporated, 6455 Lusk Boulevard, San Diego, CA 92121 (US).		(88) Date of publication of the international search report: 18 September 1997 (18.09.97)	

(54) Title: METHOD AND APPARATUS FOR PROVIDING A PRIVATE COMMUNICATION SYSTEM IN A PUBLIC SWITCHED TELEPHONE NETWORK



## (57) Abstract

A private communication network through which a plurality of member users communicate using the public switched telephone network (PSTN) (10) is disclosed herein. Each member user utilizes either a modified land line telephone (48) directly connected to PSTN (10), or uses a modified mobile telephone (22) operatively coupled to the PSTN through a wireless communication system (14). The private communication network includes network call manager (40) having a telephone network interface (92) for establishing a telephone connection with each of a plurality of telephone lines (44) of the PSTN (20). Each of the plurality of telephone lines (44) is associated with one of the plurality of member users. The network call manager (40) further includes a switch matrix (110), coupled to the telephone network interface, for providing an information signal received from an active member user over a selected telephone line to the remaining non-active member users.

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AM	Armenia	GB	United Kingdom	MW	Malawi
AT	Austria	GE	Georgia	MX	Mexico
AU	Australia	GN	Guinea	NE	Niger
BB	Barbados	GR	Greece	NL	Netherlands
BE	Belgium	HU	Hungary	NO	Norway
BF	Burkina Faso	IE	Ireland	NZ	New Zealand
BG	Bulgaria	IT	Italy	PL	Poland
BJ	Benin	JP	Japan	PT	Portugal
BR	Brazil	KE	Kenya	RO	Romania
BY	Belarus	KG	Kyrgyzstan	RU	Russian Federation
CA	Canada	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	KZ	Kazakhstan	SG	Singapore
CH	Switzerland	LI	Liechtenstein	SI	Slovenia
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovakia
CM	Cameroon	LR	Liberia	SN	Senegal
CN	China	LT	Lithuania	SZ	Swaziland
CS	Czechoslovakia	LU	Luxembourg	TD	Chad
CZ	Czech Republic	LV	Latvia	TG	Togo
DE	Germany	MC	Monaco	TJ	Tajikistan
DK	Denmark	MD	Republic of Moldova	TT	Trinidad and Tobago
EE	Estonia	MG	Madagascar	UA	Ukraine
ES	Spain	ML	Mali	UG	Uganda
FI	Finland	MN	Mongolia	US	United States of America
FR	France	MR	Mauritania	UZ	Uzbekistan
GA	Gabon			VN	Viet Nam

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 97/01521

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 H04Q7/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 676 906 A (SIEMENS AG ALBIS) 11 October 1995 see page 2, line 45 - line 51 see page 3, line 3 - page 6, line 36 ---	1,10,16, 17,23,28
A	EP 0 334 746 A (THOMSON CSF) 27 September 1989 see page 2, line 18 - line 40 see page 3, line 5 - line 23 see page 3, line 36 - page 4, line 17 see page 4, line 58 - page 5, line 15 see page 5, line 40 - line 58 --- -/--	1,10,15, 17,23,28

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*&\* document member of the same patent family

Date of the actual completion of the international search

7 July 1997

Date of mailing of the international search report

18.07.97

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Gerling, J.C.J.

# INTERNATIONAL SEARCH REPORT

Int. l. Application No  
PCT/US 97/01521

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 015, no. 078 (E-1037), 22 February 1991 & JP 02 296448 A (MITSUBISHI ELECTRIC CORP), 7 December 1990, see abstract ---	
A	US 5 383 184 A (CHAMPION TERRENCE G) 17 January 1995 -----	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. l. Application No

PCT/US 97/01521

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0676906 A	11-10-95	NONE	
EP 0334746 A	27-09-89	FR 2629295 A	29-09-89
		CA 1306319 A	11-08-92
		DE 68915597 D	07-07-94
		DE 68915597 T	15-09-94
		ES 2054043 T	01-08-94
		WO 9314603 A	22-07-93
		US 5054042 A	01-10-91
US 5383184 A	17-01-95	US 5317567 A	31-05-94
		US 5457685 A	10-10-95
		AU 2321892 A	05-04-93
		WO 9305595 A	18-03-93
		US 5272698 A	21-12-93